Safeguarding the Digital Legacy
IFI SCRIPTS & Loopline
Digital Preservation Coalition Webinar
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IFI Irish Film Archive Staff

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IFI Irish Film Archive

National cultural institution for film in Ireland
Remit to Exhibit, Educate and Preserve

Preservation= Ireland’s National Film Archive:
Custodian of Ireland’s moving image heritage,
750 donors plus State funded material from Arts Council, BAI and Screen Ireland
30,000 cans of film and 15,000 broadcast tapes
Collections spanning 1897 to present day in climate controlled vaults
IFI Digital Mandate

The digital preservation mandate of the IFI is twofold:

▪ The IFI must be able to accept material currently being produced in a digital format (born digital) by the broadcast & film industry and ensure it is both preserved & accessible in the future.

▪ IFI must digitise its existing analogue collections (both tape and film) to a high resolution digital format to protect them against media obsolescence and format deterioration, ensuring that they are preserved and accessible.
Digital Drivers

Digital technologies benefits:

● cheaper creation,
● cheaper distribution,
● lossless copying,
● a wide range of access activities
● WE HAD NO CHOICE!
Why was it such a challenge?

• Speed of change: little change for 100 years, then rapid move of film production, distribution and exhibition to digital.
• Whole new set of technical and financial challenges for Archivists requiring a complex set of IT based solutions.
• Lack of consensus standards or formats for digital preservation.
• Lack of understanding at stakeholder, funder and policy maker level.
• Budget, initial and ongoing costs.
The IFI set up 2 internal research groups to look at digital preservation:

• Researched the activities of Archive colleagues globally & examined the recommendations of various expert professional bodies.

• Looked at international examples of best practice relating to digitisation, file formats, metadata standards, storage and access technology.

• Worked with our technical partners to formulate a scalable, cost effective and practical digital preservation strategy.
IFI’s requirements...

for any procedure or technical solution

**Flexibility.** Systems designed on a modular basis with each component capable of functioning as an independent unit or within a larger network.

**Scalability.** Processes designed to allow for integration of future technologies & storage operations, when technology becomes available and as funding permits.

**Sustainability.** Solutions chosen that can be maintained within organisational resources and development of new partner agreements.
Digital Strategy

Created a Digital Strategy document (DPAS)

Approached government & industry for financial support.

Developed international relationships.

Implemented open source solutions to introduce a range of microservices.

Introduced in-house scanning and restoration.

Increased access to the collections via IFI Player.
Received funding from the Broadcasting Authority of Ireland to assess, conserve, catalogue, digitise and make available the collection of independent production company Loopline.

The Loopline project was an opportunity to put our core principles into action and test IFI Scripts end to end.
Loopline Project

IFI Irish Film Archive:
Kasandra O’Connell
Raelene Casey
Kieran O’Leary
Aoife Fitzmaurice
Brian Cash

Loopline Film Ltd:
Sé Merry Doyle
Eugene Finn
Loopline Project - collection content

Documentaries/ original camera material (Rushes)
- Social history & social justice
- (re)development of Dublin & architecture
- Irish crafts & folklife
- Cultural figures
- IRA/The Troubles
Magnetic Tape Formats

- Betacam SP
- Digital Betacam
- MiniDV
- DVCam
- DAT
In-house Tape Migration

Monitor and Control

Enhance Knowledge and Skills

Guidelines for Migration of each Tape Format

Guidelines for Quality Control including QC and Deck Maintenance
Hard Drives

XDCam
P2
Converted
Quicktimes
Examples of Hard Drives
IFIscripts

microservice architecture
open source software preservation context
Automated workflows

Submission Information Packaging
Archive Information Packaging
Normalisation of objects
Creation of access proxies
Harvesting PBCore metadata xmls
Concatenating clips from Camera Cards
Introduction

Summary

These are Python 2.7 scripts that facilitate collections management workflows within the IFI Irish Film Archive. These scripts have been tested in OSX, Windows 7 & 10, Ubuntu 14.04 & 16.04. They are located here on github: https://github.com/kieranjol/IFIscripts

Most scripts take either a file or a directory as their input, for example `makeffv1.py filename.mov` or `premis.py path/to/folder_of_stuff`. (It's best to just drag and drop the folder or filename into the terminal as this provides the absolute path).

We want the project to be as reusable as possible in different institutions and contexts. Some scripts, particularly anything to do with \texttt{Object Entry} or \texttt{Accessioning} will be quite IFI specific, but other scripts such as `makeffv1.py`, `dcpaccess.py` and many others have been used in a variety of contexts in several different countries.

The project uses the MIT license, and we encourage the reuse, modification and study of the scripts. It's always nice to hear when the scripts have been reused in some way, but it's not necessary to let us know.

Purpose

These python scripts facilitate much of our collections management procedures for digitised and born digital objects in the Irish Film Institute. We utilise a lot of open source tools, so we wanted to make these scripts as open as possible. This is why this project has the MIT License.

The Irish Film Institute has followed the SPECTRUM museum collections management standard for several years. These scripts attempt to follow SPECTRUM procedures while also utilising some of the concepts of the Open Archival Information System (OAIS). Initially the scripts only handled single video files, but they are now capable of handling:

- Digital Cinema Packages
We have already used this project as an example of our work in a number of teaching scenarios including a Masters level digital preservation module in partnership with the University of Maynooth and will continue to use it in future for example in the FIAT/IFTA training module which took place in November 2018.
Outcomes

• Preserved this important collection, being published in mid April on IFI Player.
• Raised awareness of the importance of Digital Preservation (public, vendor, funder, management, educational level)
• Innovative tools & workflows already adopted by peer organisations.
• Act in an advisory capacity & partner with others to protect moving image heritage.
• Influenced national guidelines for digital preservation.
• Encouraged other archives to empower themselves & be brave.
• Example of what can be achieved with few resources but passion & commitment.
Next steps

- Expand IFIscripts to include other AV & non moving image formats.
- Continued upskilling of archive staff and R’n’D.
- Wave the flag for Digital Preservation through more high profile projects.
- Work with other Irish organisations to advise & assist in Digital Preservation.
- Consolidate International partnerships.
- Fund open source software development to ensure availability of affordable & sustainable solutions.
- Continue to teach digital preservation & open source tools at third level.
- Complete current DPAS and write the next one in 2020.
That's all folks, any questions?